

===== WPI =====

TI - Coating for yttrium silicate film formed on silicon carbide - involves coating oxides of boron, zinc, sodium and iron and heat treating  
 AB - JP11278968 NOVELTY - Any one or two of B<sub>2</sub>O<sub>3</sub>, ZnO, Na<sub>2</sub>CO<sub>3</sub> and Fe<sub>2</sub>O<sub>3</sub> are mixed and coated over surface of Y<sub>2</sub>SiO<sub>5</sub> and heat treated.  
 - USE - For yttrium silicate film formed on silicon carbide.  
 - ADVANTAGE - Improves oxidation resistance of silicon carbide.  
 - (Dwg.0/5)  
 PN - JP11278968 A 19991012 DW199954 C04B41/89 005pp  
 PR - JP19980085544 19980331  
 PA - (MITO ) MITSUBISHI JUKOGYO KK  
 MC - L02-G12 L02-J02C  
 DC - L02  
 IC - B01J19/00 ;C04B41/87 ;C04B41/89  
 AN - 1999-629172 [54]

===== PAJ =====

TI - METHOD FOR IMPROVING AIR-TIGHTNESS OF DIYITRIUM SILICON PENTOXIDE COATING FILM  
 AB - PROBLEM TO BE SOLVED: To increase the air-tightness of a Y<sub>2</sub> SiO<sub>5</sub> coating film and completely prevent the oxygen attack on the surface of a part from outer environment by coating a surface of a Y<sub>2</sub> SiO<sub>5</sub> coating film with an oxide composed of B<sub>2</sub> O<sub>3</sub> , ZnO, Na<sub>2</sub> CO<sub>3</sub> or Fe<sub>2</sub> O<sub>3</sub> or their arbitrary mixture and heat-treating the coated product.  
 - SOLUTION: The surface of a Y<sub>2</sub> SiO<sub>5</sub> coating film formed on the surface of a part is coated with B<sub>2</sub> O<sub>3</sub> , ZnO, Na<sub>2</sub> CO<sub>3</sub> or Fe<sub>2</sub> O<sub>3</sub> or their arbitrary mixture and heat-treated at 1573-1973 K for 1-100 hr to increase the air-tightness of the Y<sub>2</sub> SiO<sub>5</sub> coating film. The oxide to be applied to the surface of Y<sub>2</sub> SiO<sub>5</sub> may be incorporated with <=70 mol.% of Y<sub>2</sub> O<sub>3</sub> , SiO<sub>2</sub> or their mixture. The applied oxide is introduced into the open pore of the Y<sub>2</sub> SiO<sub>5</sub> coating film to close the open pore and remarkably improve the air-tightness of the Y<sub>2</sub> SiO<sub>5</sub> coating film. Accordingly, the oxygen attack on the surface of the part from outer environment is sufficiently prevented to get a satisfiable oxidation inhibiting effect.  
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